

Getting your hands dirty

Maintaining the ancillary equipment on a tipper is a job often overlooked. With the help of leading brands in lifting gear and body hoists, Kevin Swallow presents a guide to inspection, care and maintenance of auxiliary components. Operators, roll up your sleeves

The last thing that should ever happen is your truck failing because of a lack of maintenance. Sometimes, service requirements are codified in contract. For example, a requirement for tipper operators registering for FORS (Fleet Operator Recognition Scheme) membership is that the procedure for maintenance of the vehicle, bodywork and ancillary equipment is clearly defined. That's a development welcomed by the industry, as some experts are voicing concerns that, often, no one takes responsibility

for the maintenance of anything beyond the chassis cab.

"As vehicles become increasingly technical, more operators have moved away from having their own workshops and begun relying on repair and maintenance contracts to look after their vehicles. This, in turn, has led to a question of responsibility as to who looks after the 'other bits' attached to the chassis," says Anthony Williams, who runs a transport consultancy in Manchester. "My advice is to have that conversation with the dealer, so you know, one way or the other, who is doing

all the maintenance on the vehicle. In the end, accountability falls on the person with the operator's licence."

Speaking at the Tip-Ex show in Harrogate last month, Pete Vann, managing director of hydraulic component supplier Binotto (UK), observed: "Today, a lot of operators do not want to get their hands dirty and leave it to a garage, but often they just don't know if it's been properly maintained."

Problems can start even before the customer takes delivery of a vehicle. He pointed to a display vehicle at the show fitted with Binotto front-end lifting gear. A grease point is missing on the cylinder's lifting bracket. "We send details of how to maintain the equipment when we supply it to the bodybuilder. But what happens to it after that, I don't know," he said.

These kinds of misunderstandings are all too common. Also at the show, Karl Hinds, director at tipper bodybuilder Harsh, pointed to a place on a new vehicle where a sticker with the location of an obscure grease point had been painted over. He added: "We had one example of a rear hinge bracket that actually seized; it hadn't been greased in five years. The answer to that is automatic lubrication, but it's £2,000, so often customers won't fit it," he says.





Peter Smith, sales and marketing director at Edbro, argues that while checking components and equipment can be relatively easy, technicians need to know what to look for. He says: "Around the base of the cylinder is a cavity that requires about a litre of grease. Sometimes a small amount of water makes its way into the cylinder through the cushion ring above, making it bubble and corrode." He also advises that the air filter be kept clean, so air can get into the tank when in use. If blocked, it can create a vacuum and implode.

The most common trait on neglected tippers is dry joints where grease points have been underused, so checking the hinge in the lifting bracket and the rear hinge is important. Adds Smith: "The PTO and hydraulic pump are the heart of the system driven by the truck's gearbox. They are expensive components, so regular visual checks are essential to avoid a potential major failure.

"Hydraulic pumps have seals fitted that separate the hydraulic oil from the gearbox oil. If those seals fail for any reason, hydraulic oil can then flood the gearbox, causing a nasty shock; gearboxes don't like hydraulic oil. Pumps generally have a tell-tale hole that will drip oil should the seals fail in any way, so that's another important regular visual check to do," Smith concludes. [TE](#)

MAINTENANCE GUIDELINES

The key areas to check include in-cab controls, air and oil pipes, electrical cables, PTO (power take-off), hydraulic pump, tipper valve, oil tank, oil filter cap, ram nut, ram tube, cover tube and plastic cap, cylinder lifting bracket, cradle bracket (including tank trunnion arm), body hinge bracket and hinge bar, cover sheet and tailgate. Ensure that all grease points are fitted.

Typically, a regular inspection of the operational equipment should take place every four to six weeks, with the driver undertaking a daily walk-around vehicle check. Below are some items to keep in mind. Instructions from the manufacturer and bodybuilder should take precedence over these.

DAILY

- The driver's pre-shift vehicle inspection should include a visual check of the components with an eye on oil leaks and assessing the tank's oil level, and extent of air leaks and damage. Report if the cylinder's outer cover is loose, any ram tube is damaged, base ram nut is loose, or if there are signs that the pins are worn in ram trunnion arms or rear hinge brackets

WEEKLY

- Spend 30 minutes repeating the daily visual check armed with replacement grease points and a grease gun, in case anything is damaged or dry. Confirm that pipes are not kinked, damaged, rubbing against metal; check they are safely stowed
- Top up hydraulic oil to mesh level, if needed
- Any new PTO/pump mounting bolts should be checked before reaching 1,000 miles

MONTHLY

- Lubricate all the grease points around the vehicle, including the hinges on the tailgate and locking mechanism, and check the stabiliser frame and tipper hinge bar
- Inspect all hoses and connectors for oil leaks and chafing. Replace any damaged or worn
- Go around each bolt and cover stud and check tightness. Replace damaged or worn parts with like-for-like bolts, or ones of higher quality
- Examine connections on hydraulic pipes and air pipes for leak-tightness
- Clean the air filter on the oil tank
- Check PTO/pump for oil leaks. Also check ram tubes, the tipper valve and ensure gland nuts are tight (visible threads could indicate loosening)

QUARTERLY

- Use spanners on the PTO, hydraulic pump, tipper valve and brackets to ensure bolts are tight

ANNUAL

- Drain the hydraulic oil and replace it with new

- Check older cylinders for corrosion on the outer cover tube, especially behind the trunnion ring
- Check pin wear in trunnion arms; if more than 5% of the diameter, the pin needs replacing

COVER SHEETS

There are essentially two types: side-to-side and front-to-back. Each has its own checks.

DAILY

- Both types: Check sheet for damage, straps for signs of wear, and for flush fitting when body is covered
- Front-to-back: Check poles on flip system used for muckaway bodies are straight and lock in at the rear

WEEKLY

- Both: Check the oil level is 50mm below the filler point, and look for leaks
- Side-to-side: Check hose connections and fittings; check straps for tension
- Front-to-back: Inspect tension of all cables and look for wear, cuts and rust. Clean and lubricate cables; confirm tightness of fasteners; confirm security of cable clamps; check rear bow alignment; inspect all hydraulic connections

MONTHLY

- Both: Check and clean electrical connections
- Front-to-back: Grease drive shaft bearings

SIX-MONTHLY

- Front-to-back: Remove cable clamps and look for corrosion or broken wires

ANNUAL

- Side-to-side: Change hydraulic oil
- Front-to-back: Replace cables and damaged fasteners. After a month, reexamine the new cables, as they will stretch

BIENNIAL

- Front-to-back: Change hydraulic oil, sooner if regularly exposed to dust